

Montana *Comprehensive Assessment* *System* (MontCAS CRT)

GRADE 5
COMMON RELEASED ITEMS
SPRING 2011



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Denise Juneau, State Superintendent

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Reading Directions

This Reading test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes two types of questions: multiple-choice and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

CORRECT MARK	INCORRECT MARKS
<input checked="" type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/>

If you decide to change your answer to a question, erase the wrong mark completely before filling in the circle of the new answer. Be sure you have only one answer marked for each question. **If two circles are bubbled in for the same question, that question will be scored as incorrect.**

If you are having difficulty answering a question, skip the question and come back to it later. Make sure you skip the circle for the question in your Answer Booklet.

For the other types of questions in the Test Booklet, you will be asked to write your answers in the box provided. Read the question carefully. If a question asks you to explain your answer or to show your work, be sure to do so.

You may make notes or use highlighters in your Test Booklet, but you must bubble or write your final answers in your Answer Booklet. **Do not make any stray or unnecessary marks in your Answer Booklet.**

Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. What is the capital of Montana?
 - A. Browning
 - B. Glendive
 - C. Helena
 - D. Missoula

Reading

Read the passage about the migration of the Arctic tern. Then answer the questions that follow.

Ride the Wind

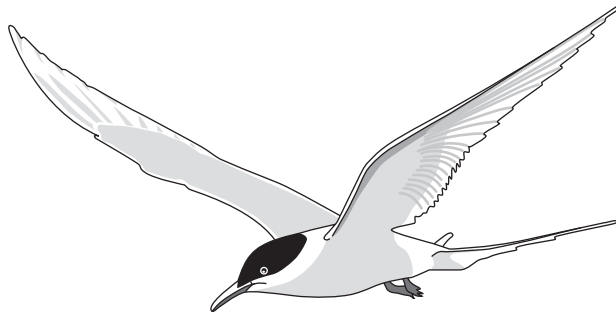
by Seymour Simon

The seasonal journeys of large groups of animals are called migrations. Animals migrate when the weather becomes too cold or too hot, or when food is unavailable.

2 Among migrating birds, the Arctic tern is the long-distance champion of air travelers. Each year, adult terns fly from the Arctic to the Antarctic and back again. The round-trip journey of about twenty-five thousand miles takes eight months of almost nonstop flying. On its trip, the tern passes from a northern summer to a southern summer. When a tern arrives at its Arctic breeding grounds in spring, it returns to the same area it left the previous autumn.

In the autumn, terns from Greenland and Canada ride on westerly winds across the stormy Atlantic Ocean to Europe and then head south along the coast of West Africa. While traveling, terns plunge into the cold waters along their path to capture fish.

About February, adult terns begin their journey back to the Arctic. Most of the young birds remain in the south during their first year. By the third spring they fly back to the Arctic to find a mate and breed. As adults they will spend the rest of their lives—twenty to thirty years—following an endless summer around the world.



1. In paragraph 2, the author calls the Arctic tern the “long-distance champion of air travelers” to describe the bird’s
 - A. amazing abilities.
 - B. humorous behavior.
 - C. sudden popularity.
 - D. unusual appearance.
2. Based on the passage, which event would **most likely** cause a group of animals to migrate?
 - A. The fish they eat become scarce.
 - B. They depend too much on humans.
 - C. They have too many young to care for.
 - D. The routes they travel become familiar.
3. In the last paragraph, what does it mean that the terns follow an “endless summer around the world”?
 - A. They never find a place to rest.
 - B. They fly only when the sun is out.
 - C. They look for brightly colored fish.
 - D. They always travel toward warm areas.
4. Which human athlete is the Arctic tern **most** like?
 - A. a golfer
 - B. a gymnast
 - C. a marathon runner
 - D. a weight lifter
5. Which sentence from the passage is an opinion?
 - A. “Among migrating birds, the Arctic tern is the long-distance champion of air travelers.”
 - B. “On its trip, the tern passes from a northern summer to a southern summer.”
 - C. “While traveling, terns plunge into the cold waters along their path to capture fish.”
 - D. “About February, adult terns begin their journey back to the Arctic.”
6. The **main** purpose of the passage is to
 - A. describe.
 - B. entertain.
 - C. inform.
 - D. prove.
7. Which graphic, if added to the passage, would **most** help readers understand the information?
 - A. a diagram of the Arctic tern’s wings
 - B. a map showing the Arctic tern’s journey
 - C. a graph showing temperature changes in the Arctic
 - D. a photograph of spring nesting grounds in the Arctic

Read the story about two old friends, and then answer the questions that follow.

Old Joe and the Carpenter
An Appalachian Tale of Building Bridges
Retold by Pleasant DeSpain

Old Joe lived way out in the countryside, and he had one good neighbor. They'd been friends all their lives. And now that their spouses were buried and their children raised, all they had left were their farms . . . and each other.

But for the first time, they'd had an argument. It was over a stray calf that neither one really needed. It seemed as though the calf was found on Joe's neighbor's land and so he claimed it as his own. But Old Joe said, "No, that calf has the same markings as my favorite cow, and I recognize it as being mine."

- 3** Well, they were both a bit stubborn, so they just stopped talking to each other. It seemed that a dark cloud had settled over Old Joe . . . until there came a knock on his door one week later.

He wasn't expecting anybody that morning, and as he opened the door, he saw a young woman who had a box of tools on her shoulder. She had a kind voice and dark, deep eyes, and she said, "I'm a carpenter, and I'm looking for a bit of work. Maybe you'd have some small jobs that I can help with."

Old Joe brought her into the kitchen and sat her down and gave her some stew that he had on the back of the stove. There also was home-cooked bread, fresh churned butter and homemade jam.

- 6** While they were eating and talking, Joe decided that he liked this young carpenter, and he said, "I do have a job for you. Look right there through my kitchen window. See that farm over there? That's my neighbor's place. And you see that crick [creek] running right down there between our property lines? That crick, it wasn't there last week. My neighbor did that to spite me. He took his plow up there, and he dug a big old furrow from the upper pond and flooded it.

"Well, I want you to do one better. Since he wants us divided that way, you go out there and build me a fence—a big, tall fence—so I won't even have to *see* his place anymore!"

- 8** And the carpenter said, "Well, if you have the lumber and the nails, I got my tools, and I'll be able to build something that you'll like."

Joe had to go to town to get some supplies, so he hitched up the wagon and showed the carpenter where everything was in the barn. The carpenter carried everything she needed down to the crick and started to work.

The carpenter's work went smooth and fast. She did her measuring and her sawing and her nailing. It was about sunset when Old Joe returned, and the carpenter had finished her work. When Old Joe pulled up in that wagon, his eyes opened wide and his mouth fell open: There wasn't a fence there at all.

It was a bridge, going from one side of the crick to the other! It had handrails and all—a fine piece of work—and his neighbor was just starting to cross the bridge with his hand stuck out, and he was saying, “Joe, you’re quite a fellow to build this bridge. I’d never been able to do that. I’m so glad we’re going to be friends again!”

And Joe, he put his arms around his neighbor and said, “Oh, that calf is yours. I’ve known it all the time. I just want to be your friend, too.”

About that time, the carpenter started putting her tools in the box and then hoisted it onto her shoulder and started to walk away. And Joe said, “Wait, come on back, young carpenter. I want you to stay on. I got lots of projects for you.”

14 The carpenter just smiled and said, “I’d like to stay on, Joe, but you see, I can’t. I got *more* bridges to build.”

So she walked on, and there ends my tale.



8. In the beginning of the story, why is Joe upset?
- A. He thinks his neighbor has stolen his calf.
 - B. He thinks his neighbor's calf is on his land.
 - C. He thinks the carpenter is working for his neighbor.
 - D. He thinks his neighbor owns more cows than he does.
9. In paragraph 3, which word means the opposite of stubborn?
- A. certain
 - B. difficult
 - C. unkind
 - D. willing
10. In paragraph 6, why are there brackets around the word *creek*?
- A. to show the narrator's thoughts
 - B. to show another word for *crick*
 - C. to show that Joe says the word aloud
 - D. to show that the word *crick* is important

11. Why does Joe's neighbor dig the creek?
- A. His farm needs water.
 - B. He wants to upset Joe.
 - C. His pond has become too full.
 - D. He is bored without Joe's company.

12. Read this line from paragraph 8.

"I'll be able to build something that you'll like."

What is surprising about the carpenter saying this to Joe?

- A. She is unsure of what she will build.
 - B. Joe is stubborn and not easy to please.
 - C. Her plan is the opposite of what Joe expects.
 - D. She does not think she is a very good carpenter.
13. When Joe sees his neighbor on the bridge, how does he know the neighbor wants to be friends again?
- A. The neighbor repairs the ditch.
 - B. The neighbor holds out his hand.
 - C. The neighbor brings back the calf.
 - D. The neighbor says he likes the bridge.

14. In paragraph 14, what does the carpenter **most likely** mean by saying, “I got *more* bridges to build”?
- A. She has other people to help.
 - B. She wants a job that pays more.
 - C. She needs to work to make a living.
 - D. She is going to work for the neighbor.
15. How are Joe and his neighbor alike?
- A. They wish they had other friends.
 - B. They want to sell the calf for money.
 - C. They do not like changes on their land.
 - D. They do not want to admit they are wrong.
16. Which sentence shows the turning point in the story?
- A. “It seemed as though the calf was found on Joe’s neighbor’s land and so he claimed it as his own.”
 - B. “Joe had to go to town to get some supplies, so he hitched up the wagon and showed the carpenter where everything was in the barn.”
 - C. “There wasn’t a fence there at all.”
 - D. “So she walked on, and there ends my tale.”
17. What is the **main** purpose of the story?
- A. to teach a lesson about friendship
 - B. to describe the work done on a farm
 - C. to tell what life in the country is like
 - D. to encourage kindness to older people
18. With which saying would the author **most likely** agree?
- A. Good fences make good neighbors.
 - B. If at first you do not succeed, try, try again.
 - C. Friendship is more important than property.
 - D. People are judged by what they do, not what they say.
19. Which Internet search words would be the **best** to find more information about the customs of the Appalachia region of the United States?
- A. “United States regions”
 - B. “Appalachian folktales”
 - C. “customs in the United States”
 - D. “Appalachian life”

20. Explain what lesson the story teaches the reader. Use information from the story to support your answer.

Scoring Guide

Score	Description
4	Response provides a thorough explanation of what lesson the story teaches. The explanation includes specific, relevant details from the story.
3	Response provides an explanation of what lesson the story teaches. The explanation includes supporting details from the story, but lacks specificity, relevance, and/or development.
2	Response provides a partial explanation of what lesson the story teaches. The explanation includes limited supporting details and/or is partially correct.
1	Response makes a vague or minimal statement of what the lesson is.
0	Response is incorrect or irrelevant.
Blank	No response.

Scoring Notes

An explanation of what the lesson is:

Possible lessons:

- The lesson is that friendship is more important than an argument or a calf.
- The lesson is that people should not hold grudges and/or be too full of pride.
- The lesson is that pride is dangerous.
- The lesson is to treat other people with understanding and kindness.

Details:

- Joe almost loses his best friend because of his pride. Joe's wife is dead and his children have moved away. He would be lonely without his best friend.
- Neither Joe nor his neighbor needed the calf but they both say it is theirs. Joe is stubborn and puts his pride and desire not to lose an argument above his friendship with his neighbor.
- Joe thinks he wants a fence so he cannot see his friend/neighbor anymore, but he actually needs a bridge to reunite with him.
- Joe says the calf is his neighbor's and "I just want to be your friend, too."

Example of Score Point 4

The story teaches the reader that you should always tell the truth. It also teaches that you should never be stubborn. The last thing the story teaches is that you should always be helpful and help when there is a problem. It says that Joe knew all along that the calf was his neighbor. So that is why you should always tell the truth. It says that both of the neighbors were stubborn so they stopped talking to each other. So that is why you should never be stubborn. It says that the carpenter built a bridge instead of a fence to help with their problems. So that is why you should be helpful and help when there is a problem.

Example of Score Point 3

This story teaches the reader about freindship. It tells you what and what not to do. Example, if you have a freind why rine your freindship over an animal. And another thing the story tells you is always make up with your freind, no reason to keep fighting. I like how the author puts the bridge in the story, it helps you realize the emotion. Now you know freindship is to special to take away over an animal. This is what I thought the reader about, freindship.

Example of Score Point 2

I think the lesson is don't fight with someone that your really close to. If you fight over something that is silly then you could lose your friend. Just like the farmer and neighbor, they fought over the calf and that is very silly. I think that they could share it or someone keep that one and go out and buy another one. I don't see why people have to fight over silly things.

Example of Score Point 1

It can teach us do not fight over
a calf to break friendship

Example of Score Point 0

it teaches the reader to
help people

Read this experiment. Then answer the questions that follow.

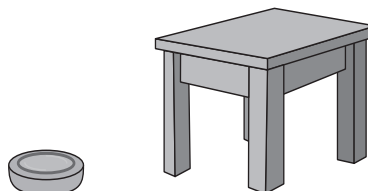
Take It for a Spin!

by Eric Muller

Figure out which way a bottle top will land even before you spin it. Do this simple “pop-top” experiment and learn how to win almost every flip (or spin) you toss.

Ingredients

- Hard, flat table
- Twist-off metal bottle cap from a glass soda-pop, juice, or ketchup bottle

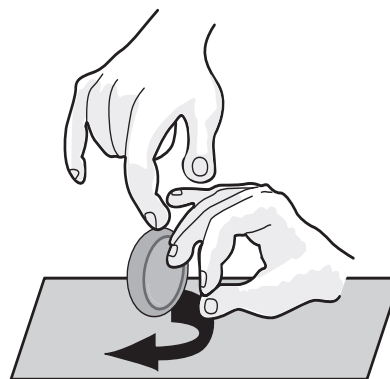


Recipe

Tip: The best kind of caps to use are the thin metal ones from wide-mouth tea and juice bottles.

1. Call the top of the lid “heads” and the bottom “tails.”
2. Choose a side. What do you call? “Heads” or “tails”?
3. Spin the lid on its edge, using a flick from your thumb and forefinger to get it going. Let the lid spin freely. Don’t let it bump into anything while it’s spinning. Don’t let it fall off the table either.
4. Allow the lid to come to rest. Did you call it correctly?
5. If you want to know how the top lands almost every time, you need to repeat this experiment several times. Spin the lid some more and record what happens after each spin, as we’ve done in the table on the following page.

Tails Heads



Food for Thought

Every time you spin the top, you do an experiment. If you record the outcome of each spin, you are collecting *data*. Data is the information you gather when you do science. Scientists then examine the data, looking for patterns that might help them come to a conclusion.

Do you see a pattern in your data? Did you figure out how to win your spins? If so, you probably noticed that bottle tops don't spin like most coins (half heads-up and half tails-up). Because of their shape, bottle tops almost always land heads-up!

More to Chew On

Many people do science to figure out what has happened or what will happen. Making a guess about what will happen is called a *prediction*. Scientists try to predict future events. When will an earthquake happen? When will it rain? When will a comet fly by in outer space? When will dessert arrive?

Number of Spins	Heads	Tails
1st spin	Yes	
2nd spin	Yes	
3rd spin	Yes	
4th spin		Yes
5th spin	Yes	
6th spin	Yes	
7th spin	Yes	

21. What information is provided in the two sentences below the title?
 - A. the purpose of the experiment
 - B. directions for doing the experiment
 - C. questions to ask about the experiment
 - D. a list of materials needed for the experiment
22. Right after choosing "heads" or "tails," you should
 - A. spin the lid on the flat table.
 - B. allow the lid to come to rest.
 - C. make a chart to record results.
 - D. look for a pattern in the results.
23. Which side of the lid usually lands facing up?
 - A. the top
 - B. the bottom
 - C. the side you have called "tails"
 - D. the side you flick with your fingers
24. In the part called **Food for Thought**, what does the word conclusion mean?
 - A. a plan for what to do next
 - B. a responsibility to record data
 - C. a need to repeat an experiment
 - D. a decision based on careful thought

25. Which table shows the **most likely** results if you repeated this experiment using a coin?

A.

Number of Spins	Heads	Tails
1st spin	Yes	
2nd spin	Yes	
3rd spin	Yes	
4th spin	Yes	
5th spin	Yes	
6th spin	Yes	
7th spin	Yes	

B.

Number of Spins	Heads	Tails
1st spin		Yes
2nd spin		Yes
3rd spin		Yes
4th spin		Yes
5th spin		Yes
6th spin		Yes
7th spin		Yes

C.

Number of Spins	Heads	Tails
1st spin	Yes	
2nd spin	Yes	
3rd spin	Yes	
4th spin	Yes	
5th spin		Yes
6th spin		Yes
7th spin		Yes

D.

Number of Spins	Heads	Tails
1st spin		Yes
2nd spin		Yes
3rd spin		Yes
4th spin		Yes
5th spin	Yes	
6th spin		Yes
7th spin		Yes

26. In the part called **More to Chew On**, why does the author **most likely** include a list of questions?

- A. to suggest other experiments students might try
- B. to show what has been answered in the experiment
- C. to explain what needs to be discovered about lid spinning
- D. to give examples of other kinds of predictions scientists make

27. Why does the author **most likely** ask, “When will dessert arrive?”

- A. to describe a problem scientists might study
- B. to entertain the reader with a silly example
- C. to persuade the reader to do more experiments
- D. to develop interest in learning more about lid spinning

Mathematics Directions

This Mathematics test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes three types of questions: multiple-choice, short-answer, and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

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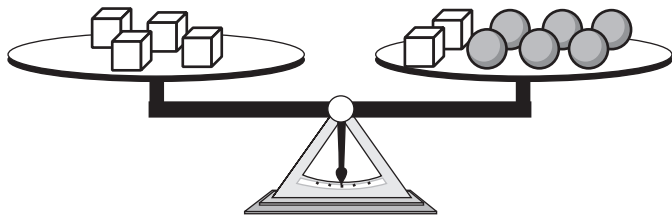
Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. Montana is the **fourth** largest state. How many states are larger than Montana?
 - A. 1
 - B. 3
 - C. 10
 - D. 42

Mathematics (No Calculator)

1. The scale shown below is balanced.



Which equation is true?

- A. =
- B. =
- C. =
- D. =
2. Austin lives $\frac{3}{4}$ of a mile from his school.
Which decimal is equivalent to $\frac{3}{4}$?
- A. 0.34
- B. 0.75
- C. 1.33
- D. 7.50

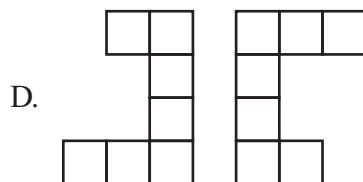
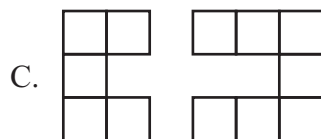
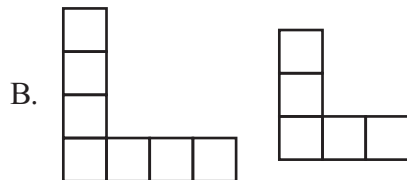
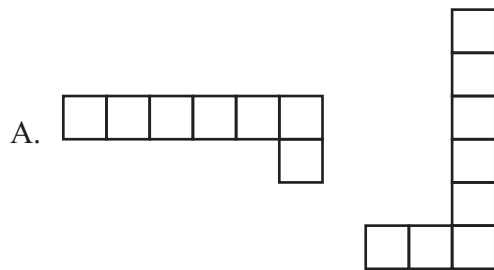
3. Mr. Martinez drove home from work.

- He began driving at 5:18 P.M.
- He arrived at his home at 6:07 P.M.

How many minutes did it take Mr. Martinez to drive home?

- A. 25
- B. 42
- C. 49
- D. 89
4. The Lewis and Clark County Fair had 248,676 visitors. What is 248,676 rounded to the nearest thousand?
- A. 240,000
- B. 248,000
- C. 249,000
- D. 250,000

5. Which pair of figures are congruent?



6. Carlos bought 3 CDs for \$8 each and 3 notebooks for \$2 each. He used the expression below to calculate his total bill.

$$(3 \times 8) + (3 \times 2)$$

What is another way Carlos can calculate his total bill?

- A. $3 \times 8 \times 2$
- B. $3 \times (8 + 2)$
- C. $3 + 8 + 2$
- D. $(3 \times 8) + 2$

7. Which number is a **composite** number?

- A. 13
- B. 17
- C. 23
- D. 27

8. Jack estimates that he has slept about 2,190,000 minutes since he was born. What is 2,190,000 written in words?

- A. two million nineteen thousand
- B. two million nineteen hundred thousand
- C. two million one hundred ninety thousand
- D. two million one hundred thousand ninety

9. Compute:

$$15.5 \times 4$$

10. What number belongs in the box below?

875, 750, , 500, 375, 250, 125

11. More lobsters are caught in Maine and Massachusetts than in any other state. In one year,

- 47,000,000 pounds of lobster were caught in Maine and
- 13,200,000 pounds of lobster were caught in Massachusetts.

How many more pounds of lobster were caught in Maine than in Massachusetts?

- A. 23,800,000
B. 33,800,000
C. 34,800,000
D. 60,200,000

12. Sally has a set of cards with only prime numbers. Which set of cards could Sally have?

- A.

9	17	26
---	----	----
- B.

1	3	25
---	---	----
- C.

2	19	23
---	----	----
- D.

5	21	13
---	----	----

13. Paula wants to buy 2 balloons. She can choose from the colors listed below.

Colors
Blue
Red
Green
Yellow

Paula can buy 2 balloons of different colors or 2 balloons of the same color. How many different combinations of 2 balloons can she buy?

- A. 8
- B. 10
- C. 12
- D. 16

14. The cook at a school cafeteria wants to know what flavors of yogurt are most popular with students at breakfast. Which group would be **best** for the cook to survey?

- A. all girls in the fifth grade
- B. all boys reading in the library
- C. the first five students who eat breakfast in the cafeteria
- D. five students chosen randomly from each table in the cafeteria at breakfast

15. Which group of fraction cards is in order from **least** to **greatest**?

A. $\frac{2}{4}$ $\frac{3}{5}$ $\frac{3}{10}$

B. $\frac{3}{5}$ $\frac{3}{10}$ $\frac{2}{4}$

C. $\frac{3}{10}$ $\frac{3}{5}$ $\frac{2}{4}$

D. $\frac{3}{10}$ $\frac{2}{4}$ $\frac{3}{5}$

16. Buses in Henry's town stop at the mall several times each day. The chart below shows the arrival times of the first five buses.

Time the Bus Arrives at the Mall

Bus	Arrival Time
1	9:15 A.M.
2	10:30 A.M.
3	11:45 A.M.
4	1:00 P.M.
5	2:15 P.M.

The pattern continues. What time will Bus 7 arrive at the mall?

- A. 2:45 P.M.
 - B. 3:30 P.M.
 - C. 4:45 P.M.
 - D. 5:00 P.M.
17. Mr. James wrote the number pattern shown below.

1, 5, 21, 85, 341

Which rule describes how to find the next number in Mr. James's pattern?

- A. $28 + 28 + 28 + 28$
 - B. $28 \div 4$
 - C. $(2 \times 4) + (8 \times 4)$
 - D. $(4 + 20) \times (8 + 20)$
18. Erica was asked to solve 4×28 . Which expression shows another way she could solve this problem?

19. The table below shows the relationship between the number of bracelets Melissa sold and the amount of money she earned.

Number of Bracelets	Money Earned
2	\$10
4	\$20
7	\$35
9	\$45

How much money would Melissa earn for selling 12 bracelets?

- A. \$15
- B. \$45
- C. \$50
- D. \$60

Mathematics (Calculator)

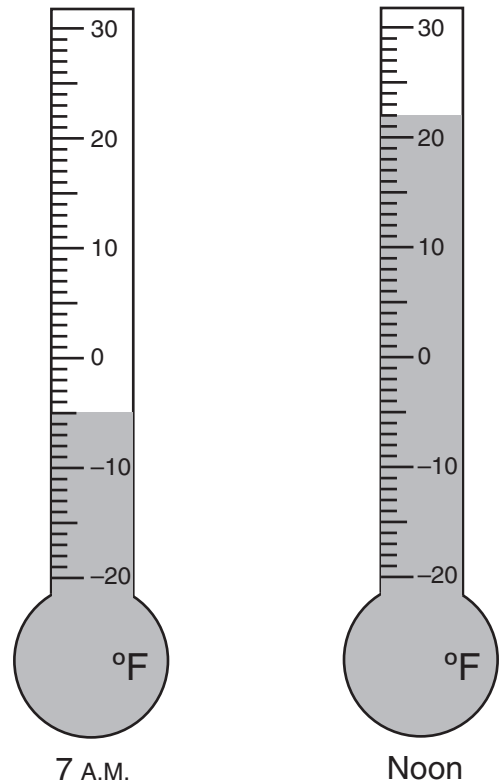
20. A box contains 12 cards. There are 3 cards that have names of boys, and the others have names of girls. Mrs. Baker picks a card without looking. What is the probability that the card has the name of a boy?

A. $\frac{1}{12}$
B. $\frac{3}{12}$
C. $\frac{6}{12}$
D. $\frac{9}{12}$

21. One mile is 5,280 feet. How many inches are in one mile?

A. 1,760
B. 5,296
C. 52,800
D. 63,360

22. Sally looked at her outdoor thermometer at two different times, as shown below.



By how many degrees did the temperature increase between 7:00 A.M. and noon?

A. 5° F
B. 17° F
C. 22° F
D. 27° F

23. The number sentences below are true. Each \square has the same value.

$$\square + \square = 16$$

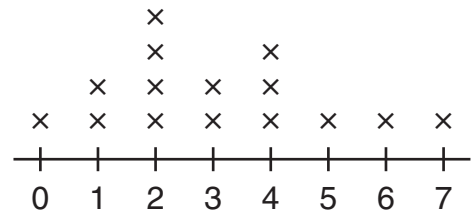
$$\square + \triangle + 3 = 17$$

What is the value of the \triangle ?

- A. 6
 - B. 8
 - C. 11
 - D. 14
24. What digit is in the thousandths place in the number 0.4675?
- A. 4
 - B. 5
 - C. 6
 - D. 7

25. The students in Mr. Carlton's class volunteer at the pet shelter. On the line plot below, Mr. Carlton recorded the number of hours each student volunteered during October.

Hours Volunteered at Pet Shelter in October

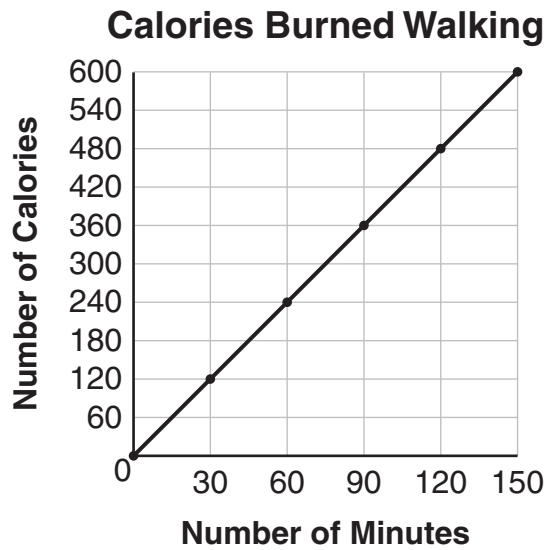


Number of Hours

What was the total number of hours the students in Mr. Carlton's class volunteered at the pet shelter during October?

- A. 46
- B. 28
- C. 15
- D. 7

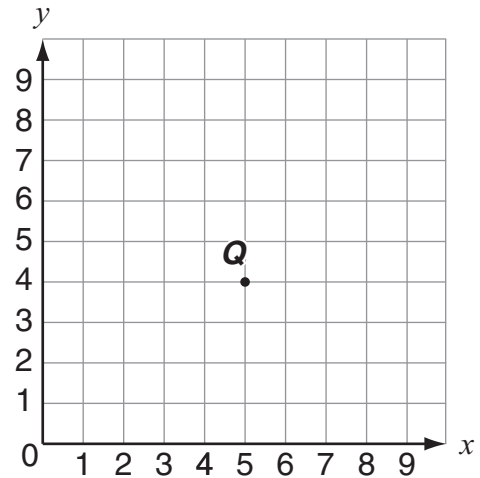
26. Heather made the graph below to show the number of calories she could burn while walking for different numbers of minutes.



About how many calories could Heather expect to burn if she walks for 45 minutes?

- A. 120
- B. 125
- C. 180
- D. 240

27. Paula drew point Q on the coordinate grid shown below.



Paula draws point R two units to the left and three units down from point Q . What are the coordinates of point R ?

- A. (2, 2)
- B. (3, 1)
- C. (3, 4)
- D. (5, 1)

28. Lisa's rectangular classroom has a width that is 3 feet less than its length. The length of the classroom is 14 feet. What is the area of the floor of the classroom?

- A. 42 square feet
- B. 50 square feet
- C. 154 square feet
- D. 238 square feet

29. Look at the pattern of dots below.


Step 1


Step 2


Step 3


Step 4


Step 5

How many dots will be in Step 7?

- A. 15
- B. 18
- C. 21
- D. 24

30. Alex used 5 square tiles to make Figure G as shown below.

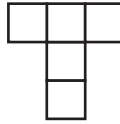


Figure G

- How many lines of symmetry does Figure G have?
- On the grid in your Answer Booklet, draw a 5-square tile figure that does NOT have any lines of symmetry. LABEL this drawing part b.
- On the grid in your Answer Booklet, draw a 5-square tile figure with more than 1 line of symmetry. Draw ALL lines of symmetry. LABEL this drawing part c.

Scoring Guide

Score	Description
4	4 points
3	3 points
2	2 points
1	1 point OR Student shows minimal understanding of the problem.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

Part a: 1 point for correct answer, **1 line of symmetry**

Part b: 1 point for correct answer, **drawing 5-tile figure with 0 lines of symmetry**

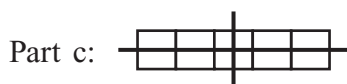
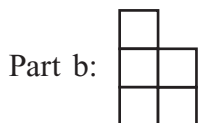
Part c: 2 points for correct answer, **drawing 5-tile figure with more than 1 line of symmetry and drawing all lines of symmetry**

OR

1 point for drawing correct figure but both lines or one line of two lines of symmetry has not been shown

Sample Response:

Part a: Figure G has 1 line of symmetry.

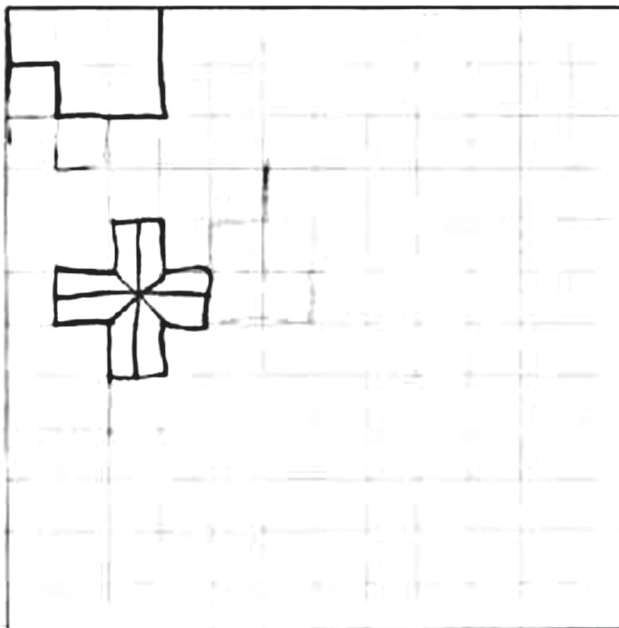


Example of Score Point 4

Sample 1

a. figure 8 has one line of symmetry

b.

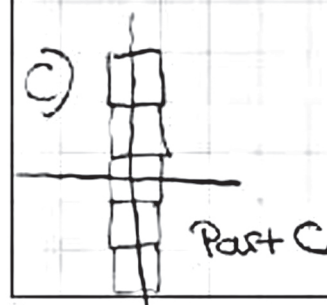
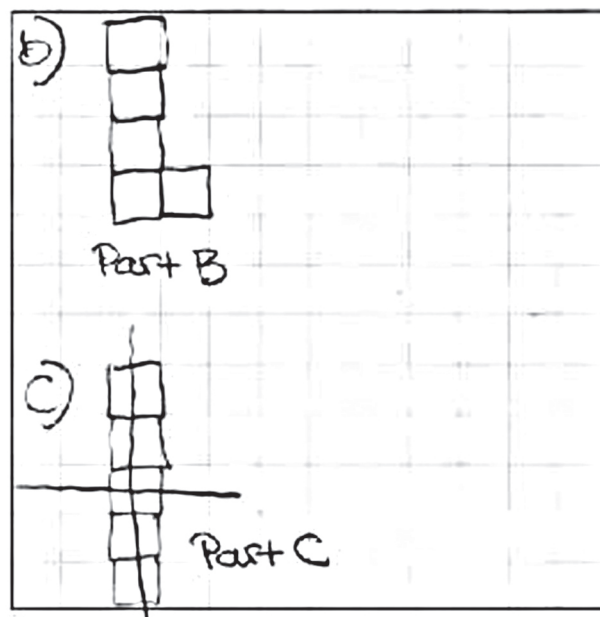


c

Example of Score Point 4

Sample 2

a) 1 line of symmetry



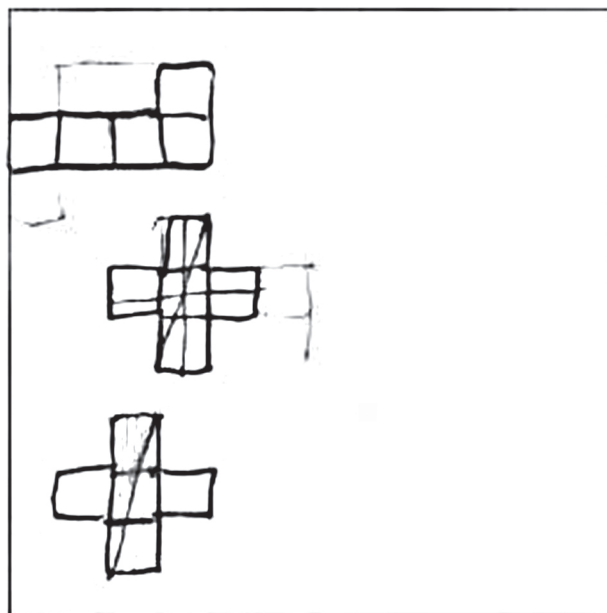
Example of Score Point 3

Sample 1

a. 1 line of symmetry



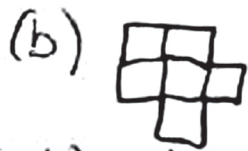
∴ = line of symmetry



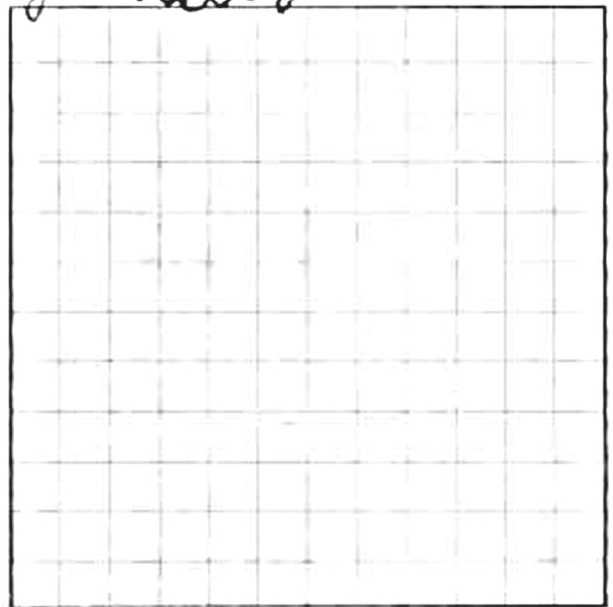
Example of Score Point 3

Sample 2

Figure 1 has 1 line of symmetry.



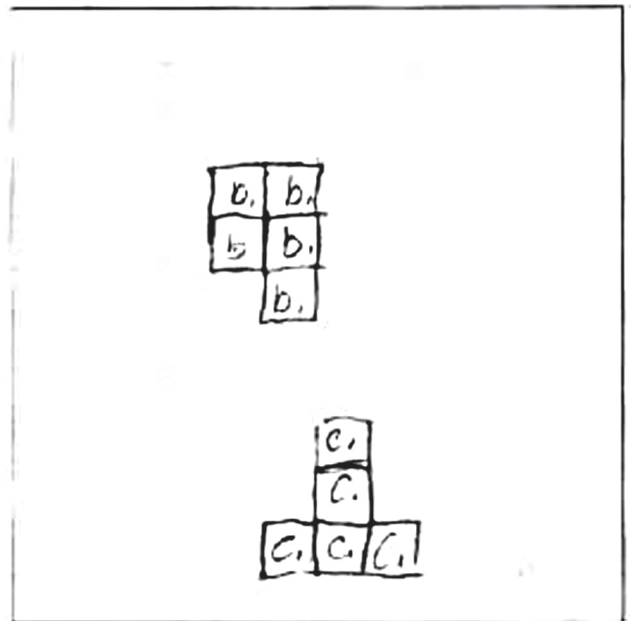
(c) 4 lines of symmetry.



Example of Score Point 2

Sample 1

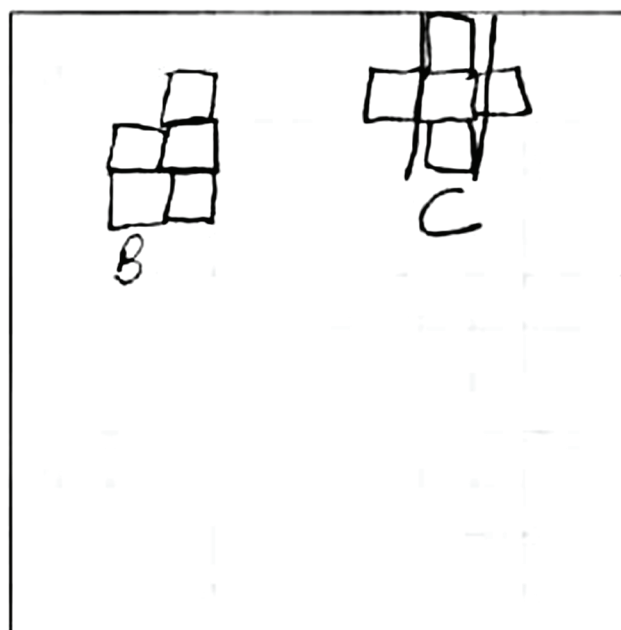
a. 1 line of symmetry



Example of Score Point 2

Sample 2

2 lines



Example of Score Point 1

Sample 1

a. 7



c.



part b.



part c.



Example of Score Point 1

Sample 2

a. 3 Symmetry lines

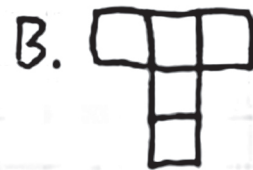
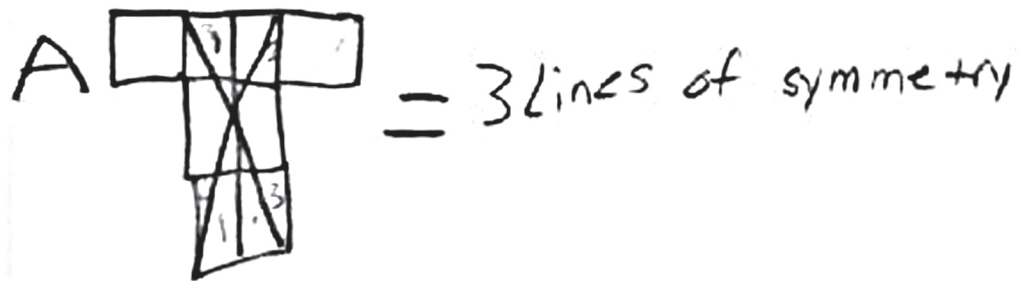
b.

c.

The image contains several hand-drawn diagrams on a grid background. At the top right is a small polyomino consisting of a vertical column of three squares. The top square has a square attached to its top, the middle square has a square attached to its left, and the bottom square has a square attached to its right. The top square is labeled '3', the middle square is labeled '1', and the bottom square is labeled '2'. Below this, on the left, are labels 'a.', 'b.', and 'c.' with arrows pointing from 'b.' and 'c.' to a larger diagram on the right. The larger diagram is enclosed in a rectangular box. Inside the box, on the left, is a vertical column of five squares labeled '1' through '5' from top to bottom. Above this column is the text 'Part b' with a downward arrow pointing to the top square. To the right of this column is a cross-shaped polyomino consisting of a vertical column of three squares and a horizontal row of three squares sharing the middle square. The top square of the vertical column is labeled '4', the middle square is labeled '2', the bottom square is labeled '5', the left square of the horizontal row is labeled '1', and the right square is labeled '3'. Above this cross is the text 'Part c' with a downward arrow pointing to the top square. An arrow points from label 'c.' to the bottom-right corner of the box containing these diagrams.

Example of Score Point 0

Sample 1



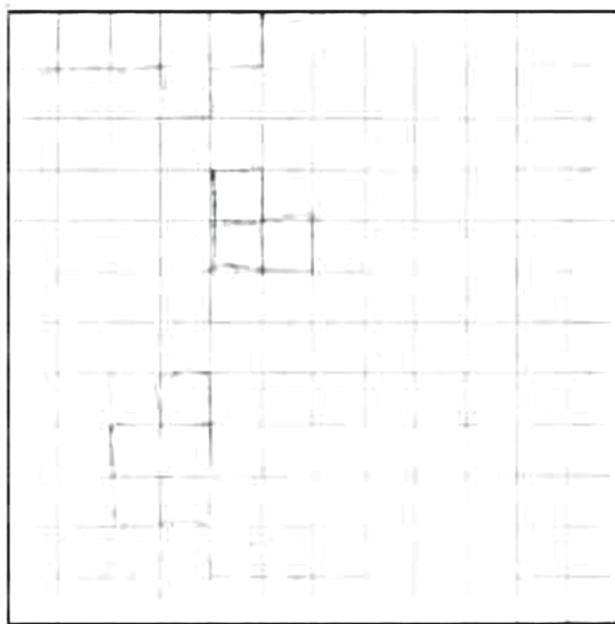
Part + B



Example of Score Point 0

Sample 2

a 2 symmetry lines



Acknowledgments

Measured Progress and the Montana Office of Public Instruction wish to acknowledge and credit the following authors and publishers for use of their work in the Montana Comprehensive Assessment System—2011.

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